Remarks

Claims 33–65 remain pending in the application. In the Office action dated Jun. 8, 2009, claims 33–65 were rejected as obvious over Nordstrom, or Mansson et al., or Oka et al., or Roell (primary references); in view of Egelhof et al., or Bubik et al. (secondary references); and further in view of Wildfong et al. (tertiary reference).

Claim 33 has been amended to claim the relationship between the dewatering in the non-pulsating dewatering step, and the dewatering that takes place in the pulsating dewatering step.

The examiner sets forth in the office action dated June 8, 2009, the following case:

> The primary references [teaching muli-ply formers] fail to teach the use of a non-pulsating dewatering zone, formed by a curved shoe, followed by a pulsating dewatering zone as claimed.
>
> ...the secondary references... teach dewatering mechanisms in which a web is formed/dewatered by passing it through a curved shoe, which could include a suction member, i.e., vacuum, and then passed through a second dewatering zone comprising pulsating mechanisms, i.e., dewatering foils or lists.... [*But fail to*] *teach the configuration of the shoe as claimed*....[Emphasis added.]
>
> However, Wildfong et al. teach that shoes as those disclosed by [the secondary reference] ...even though worked well in the past, create problems in the formation of paper due to the speed of the current papermaking machines, see ¶-[0010]-[0012]. They [the inventors] suggest [in] Wildfong et al., that a shoe having a curved leading edge and grooves or holes along the machine direction, with or without vacuum, improves formation at the speed of the current papermaking machines, see ¶-[0014]-[0024]. They teach also that by using the suggested shoe the crossmachine basis weight and pulsations are mitigated, which helps to permit a faster papermaking machine speeds while maintaining, or even improving, paper web formation, ¶-[0024]. Therefore, the substitution of the shoes taught by Egelhof et al. or Bubik et al. with the one taught by Wildfong et al. would have been obvious to one of ordinary skill in the art in order to improve paper formation,

while maintaining papermaking speeds. (Emphasis added)

The examiner applies references pertaining to single-ply formers to suggest that the multi-ply former arrangement of the claims is obvious. However, the significant difference in operation between a single ply former and a multi-ply former makes any such combination untenable.

In the specification applicant describes prior art twin-wire formers as, roll jaw formers ¶ [0013], list jaw formers ¶¶ [0014]–[0015], and roll-list jaw formers ¶¶ [0016] –[0017]. What applicant claims is a new type of twin-wire former in the context of a multi-ply former, combining a shoe similar to that disclosed in Wildfong et al., which is followed by pulsating dewatering, formed of cross machine direction lists having gaps therebetween to which vacuum is applied.

The examiner's rejection combines one of three multi-ply formers, plus one of two types of list jaw former, and the forming shoe disclosed in FIG. 9–12 of Wildfong et al.

To make a prima facie case of obviousness, as set out in MPEP sec. 2143.04, a "Reasonable Expectation of Success Is Required." A finding of a reasonable expectation of success, MPEP 2143.02 explains, citing *KSR International Co.,* requires three steps. The first step is explained as: "A rationale to support a conclusion that a claim would have been obvious is that **all the claimed elements were known in the prior art**..."

The examiner makes his case that multi-ply formers are known as illustrated by the "primary references", that the claimed forming shoe is known from Wildfong et al., and that a list former such as shown in Egelhof et al., is known, which begins drainage with a curved drainage element, followed by further drainage by pulsating dewatering.

The next step in the MPEP analysis is to consider whether **"...one skilled in the art could have combined the elements as claimed by known methods with *no change in their respective functions*...."** In a single-ply web water is removed from both sides to control or optimize web properties. However in the multi-ply web it is hardly possible to remove water through that part of the web already formed (see specification ¶[0031]). Therefore the

operation of both the claimed non-pulsating dewatering shoe, and the pulsating dewatering lists are radically altered in their operation as applied to a second or subsequent layer of a multi-ply web. The alteration in function is such that the prior art cannot be said to be a guide on whether any benefit can be achieved using the prior art structures in the multi-ply web formation situation. The primary references confirm the statement of the specification ¶[0031] that "*It is hardly possible to remove any water from this new pulp layer through the first partial web already formed*" by showing only dewatering from the side of the newly formed web layer which is not in contact with the web already formed.

The final requirement of the MPEP for showing reasonable expectation of success is that **"...the combination would have yielded nothing more than predictable results to one of ordinary skill in the art."** This requirement is clearly not met. The predictable result the examiner proposes (taken from Wildfong et al.) is that of "improve[ment of] paper formation, while maintaining papermaking speeds" and is limited to single-ply formers. Given the operational conditions of a multi-ply former which can effectively only dewater in one direction, there is nothing in the prior art providing an expectation the forming shoe of Wildfong et al., or the dewatering structures of Egelhof et al., or Bubik et al. will perform any useful function in a multi-ply former, much less work together to achieve a useful end as claimed.

Applicant believes that no new matter has been added by this amendment.

Applicant submits that the claims, as amended, are in condition for allowance. Favorable action thereon is respectfully solicited.

Respectfully submitted,

Patrick J. G. Stiennon, Reg. No. 34934
Attorney for Applicant
Stiennon & Stiennon
P.O. Box 1667
Madison, Wisconsin 53701-1667
(608) 250-4870
Amdt3.res

August 4, 2009 (11:23am)